



DOCKET NO. 2007-0891US0

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF :
FUJIO SAKURAI, ET AL. : EXAMINER: OJINI, EZIAMARA
SERIAL NO: 10/822,815 :
FILED: APRIL 13, 2004 : GROUP ART UNIT: 3723
FOR: POLISHING PAD AND :
PRODUCTION METHOD THEREOF :

PRE-APPEAL BRIEF REQUEST FOR REVIEW

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

SIR:

In response to the Office Action dated April 17, 2007, and the Advisory Action dated June 28, 2007, Applicants hereby request review of this application prior to their filing of an Appeal Brief.

Remarks/Arguments begin on page 2 of this paper.

Claim 7, the pending independent claim, reads:

7. A polishing pad, comprising a polishing layer having water-soluble particles dispersed in a polymer matrix, said water-soluble particles having an average particle diameter of 10 to 90 μm .

This claim has been rejected over a combination of Hudson and Shukla optionally in view of Hasegawa, but none of the references, alone or in combination, discloses or suggests the required water-soluble particles having an average particle diameter of 10 to 90 μm dispersed in a polymer matrix.

As admitted by Examiner Ojini at the top of page 3 of the Official Action dated April 17, 2007, Hudson fails to disclose water-soluble particles having an average particle diameter of 10 to 90 microns as required in pending Claim 7.

Shukla does not disclose water-soluble particles at all. The particles in Shukla are cerium oxide particles, which are not water soluble.¹ See, e.g., col. 2, line 67, col. 3, line 16, col. 5, line 30, col. 7, lines 55-59, and col. 8, line 3 of Shukla, and compare against the examples of water soluble particles described herein at col. 5, line 10ff:

A material constituting the water-soluble particles is not particularly limited. For example, organic water-soluble particles and inorganic water-soluble particles can be used. Illustrative examples of materials of the organic water-soluble particles include saccharides such as starch, polysaccharides such as dextrin and cyclodextrin, lactose, mannitol, celluloses such as hydroxypropylcellulose and methylcellulose, proteins, a polyvinyl alcohol, a polyvinyl pyrrolidone, a polyacrylic acid and salts thereof, a polyethylene oxide, water-soluble photosensitive resins, a sulfonated polyisoprene and a sulfonated polyisoprene copolymer. Meanwhile, illustrative examples of materials of the inorganic water-soluble particles include potassium acetate, potassium nitrate, potassium carbonate, potassium bicarbonate, potassium chloride, potassium bromide, potassium phosphate and magnesium nitrate. The above materials of the

¹ This fact is well known and indisputable. The Examiner is invited to review, e.g., The Handbook of Chemistry and Physics for both cerium (III) oxide and cerium (IV) oxide, both showing the entry "i" - insoluble - for solubility tests in both hot and cold water.

water-soluble particles may be used alone or in combination of two or more.

Shukla does use water-soluble polymers, but not as particles. He uses them *as a matrix* in which the non-water-soluble cerium oxide polishing particles are dispersed. See the paragraph bridging columns 2 and 3 of Shukla. The fact that the water-soluble polymer acts only as a binder or matrix in Shukla is depicted quite clearly in Figure 2 where matrix **32** has embedded therein cerium oxide polishing particles **31**:

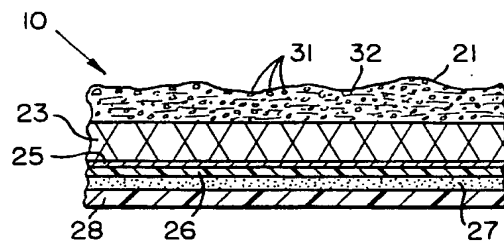


FIG. 2

Thus, and contrary to the position taken by Examiner Ojini at page 3 of the Final Rejection, Shukla does not disclose water-soluble particles having an average particle diameter of up to 15 microns. This is simply a mistake.

Hasegawa, applied against claims 10, 11, 12 and 14, is cited for the disclosure of beta-cyclodextrin and does not make up for that lacking in Hudson and Shukla. Thus, the combination of Hudson, Shukla and Hasegawa fails to present a *prima facie* case against the claims, and the rejection should be withdrawn.

The Examiner has refused entry of Applicants' June 19, 2007, amendment. However, should this case proceed to Appeal, which it should not, this amendment does place the case in better form for appeal, and it should be entered. Specifically, it places allowable Claim 9 in independent form and amends Claim 10 to depend from allowable Claim 9.

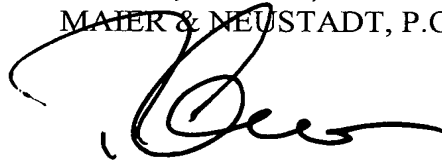
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Finally, and with regard to withdrawn Claims 1-6 and 15-20, these claims have been misapprehended by the Examiner. These claims are not method claims. Rather, these claims were amended such that they are polishing pad claims, all of which depend either directly or ultimately on the polishing pad of Claim 7. Thus, these claims must be considered and allowed together with Claims 7-13.

Accordingly, and in view of the differences between what is claimed and what is disclosed in the references, Applicants respectfully submit that an Appeal is unnecessary. All of pending Claims 1-20 herein are allowable. Early notification to this effect is respectfully requested.

Respectfully submitted,

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